



# A COMPARATIVE STUDY OF SELECTED PHYSICAL FITNESS VARIABLES BETWEEN RAJBANGSI AND GENERAL STUDENTS

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## ABSTRACT

**Introduction:** Physical fitness is the important factor of sports performance. It is an optimal level of efficiency in the functioning of the body.

**Purpose:** The purpose of this study is to compare the selected physical fitness variables among Rajbangsi and General students.

**Methods:** 50 boys students (25 Rajbangsi and 25 general students) age ranging 14-16 years were selected randomly from two high schools of two subdivisions in the district of Uttar Dinajpur, West Bengal. 50m. Dash, grip strength and Bent knee sit-up tests were used for measuring speed, muscular strength and muscular endurance. Mean, Standard deviation and t-test were computed to analyse the data. The level of significance was set as at .05 level of significant.

**Results and Discussion:** This study showed that there was significant difference exit in muscular strength and muscular endurance but no significant difference exit in speed among Rajbangsi and General Students.

**Conclusion:** From this study it was found that muscular strength of Rajbangsi students was better in comparison of General students but General students was better in muscular endurance in comparison of Rajbangsi students.

**KEYWORDS:** Physical Fitness, Adolescence, Rajbangsi

## INTRODUCTION

Concept of physical fitness is as old as humankind. Throughout the history of mankind physical fitness has been considered an essential element of everyday life. The ancient people were mainly dependent upon their individual strength, vigor and vitality for physical survival. This involved mastery of some basic skill like strength, speed, endurance, agility for running, jumping, climbing and other skills employed in hunting for their livings. Physical fitness is the ability to function efficiently and effectively without injury, to be healthy, to resist disease and to cope with emergency situation. It is the basis of dynamic and creative intellectual activity. The word physical fitness and motor fitness are often used interchangeably. The term motor fitness was developed to describe a broad concept than physical fitness. This extensive term means the ability to perform basic motor. A Comparative Study of Motor Performance Level 409 skills efficiently and effectively. Power, balance, agility, speed, reaction time and kinaesthetic perception are the traits of motor performance, and these traits plays major role in enhancing the performance of any game's skills. With a good and well efficient combination of all these motor performance traits a player can give all his/her utmost throughout the most strenuous of competitive matches. (Nabhendra Singh, 2010)

Physical and mental well being are very closely interrelated. Physical activity enhances mental development of person (Baley and Field 1976 and Cowell and France, 1963). In physical education and sports, especially, in developing physical fitness there is a large repertoire of activities for experiencing success (Kane, 1975). Krichnea (1978) recommends that success in motor skill depends upon physical fitness. Keffer (1978) showed that participation in running programme contributed to development of cardiovascular fitness. Many studies conducted outside India have advised for physical fitness has positive effect on sport performance capacity (Harre, 1977, Matwejew, 1980, Hollman, 1981). Norms of physical fitness are essential for formulation, control and assessment of training of sportsman (Singh, 1984).

Gill et al. (1988) while studying a comparative study of physical fitness and self concept of college students of physical foundation college, Amravati revealed that the group with high self concept distinctly differ from average and low self-concept groups having significantly higher man physical fitness score and the group mean difference of physical fitness scores of average and low self concept group are not satisfactorily significant. Gill and Rao (1992) in their study of self concept and physical fitness in secondary school boys revealed that the composite scores of physical fitness do not correlates with the scores of other dimensions of self concept and scores of total self concept. Rajni et al. (1999) observed that the level of physical fitness decrease significantly due to a training break of four weeks.

In adults, relationship among physical activity, health related fitness, and health are fairly well established (Bouchard and Shepherd 1994). Low levels of physical activity and cardio-respiratory fitness are both associated with higher

risk of all cause and disease specific mortality (Thune et al. 1998). Physical fitness is the ability to perform daily activities willingly and actively. Physical fitness includes not only components of sports but those of health as well. Regular physical activity prevents or limits weight gain, and gain in body mass index (BMI) (Kyle et al. 2001) The National College Health Risk Behaviour Survey reported that 35% of American college students are overweight (Lowry et al. 2000). This is not surprising considering that more than two thirds of American adult population are classified as overweight (Flegal et al. 2002), making weight gains America's leading health problem (Mokdad et al. 2001).

The expert committee of the World Health Organization (1981) described physical fitness as "the ability to undertake muscular work satisfactorily." Physical fitness is the capacity to early out, reasonably well, various forms of physical activities, without being unduly tired and includes qualities important to the individual's health and well-being.

There are many communities live in the world with their own physical characteristics such as The Africans, The Aryans and The Rajbangsi etc. Here the Researcher have tried to discuss only the facts about Rajbangsi community. Koch Rajbangsi is an ancient tribe originally from the ancient Koch kingdom. A large number of Rajbangsi people live in North Bengal such as Cooch Behar, Jalpaiguri, Darjeeling, North and South Dinajpur and Malda districts. The Rajbangsi people dress very simply. Men wear knee length dhotis and lioncloths. Women wear pieces of cloth wrapped around their bodies that cover down to their knees. The Rajbangsi are dark-skinned people of medium height. Rajbangsi Community have their own dialects, culture and way of living. The Rajbangsi people live far from roads, cities and modern life. Rajbangsi people are predominantly Mongoloid groups.

The purpose of the study was to compare strength, speed and endurance level between Rajbangsi and general students.

## METHODOLOGY

### Sample

50 boys students (25 Rajbangsi and 25 general students) age ranging 14-16 years were selected randomly as sample for the study from two high schools of two subdivisions in the district of Uttar Dinajpur, West Bengal.

### Procedure

The variables were selected based on the discussions with experts, feasibility of the criteria, availability of tools, and the relevance of the variables to the present study. The investigator selected the following variables.

Physical Fitness Variables

1. Strength
2. Speed
3. Endurance

Grip strength test was administered to measure the muscular strength. 50m dash test was administered to measure the speed. Bent knee sit-up test was administered to measure the muscular endurance. The brief Test Administrations was shown in below table.

SL.No	Physical Fitness Variables	Methods	Equipments/Test Items	Unit/ Measures
1.	Muscular Strength	Grip Strength test	Grip Dynamometer	Kg.
2.	Speed	50m. Run	100m. Track, Electronic Stopwatch, Starting Clapper, Flag Markers, Score Sheet	Sec.
3.	Muscular Endurance	Bent Knee Sit-Up test	Mat, stopwatch	No. of sit-up

**Table 1:** Test Administrations

### Statistical Treatment

Mean, standard deviation (S.D) and t- test were computed to analyze the data. The level of significant was set as at .05.

### Results

The value of mean, standard deviation and t- test was given below in table-2, 3 and 4.

Student	Mean	S.D	df	t- value
Rajbangsi	28.20	7.30	48	2.06 *
General	24.32	5.96		

\*Significant at .05 level of confidence

**Table 2:** Comparison of means of grip strength between Rajbangsi and general students

Analysis of table- 2 indicates that the mean and S.D values for grip strength of Rajbangsi and General Students were 28.20, 5.45 kg. and 24.32, 5.96 kg. respectively. It shows that strength of Rajbangsi students have performed significantly better than general students.

Student	Mean	S.D	df	t- value
Rajbangsi	7.80	0.26	48	0.49
General	7.84	0.42		

**Table 3:** Comparison of means of speed between Rajbangsi and general students

Perusal of the table- 3 shows that the mean and standard deviation values on the speed variable for Rajbangsi and General Students were recorded as 7.80, 0.26sec. and 7.84, 0.42 sec. respectively.

Student	Mean	S.D	df	t- value
Rajbangsi	19.56	3.70	48	3.02 *
General	23.56	5.50		

\*Significant at .05 level of confidence

**Table 4:** Comparison of means of muscular endurance between Rajbangsi and general students

Analysis of the table-4 shows that the mean and standard deviation values on the endurance variable for Rajbangsi and General Students were recorded as 19.56, 3.70 and 23.56, 5.50 respectively. Therefore, the general students have performed slightly better than Rajbangsi students.

The result of this study showed that there was significant difference exists at .05 level of significant in case of grip strength between Rajbangsi and General Students i.e Rajbangsi students were better in grip strength than general students. In case of muscular endurance there was significant difference exist between Rajbangsi and general students at .05 level of significant i.e. General students were better in muscular endurance than Rajbangsi students. But in case of speed there was no significant difference exist between two groups.

### Discussion and Conclusion

Physical fitness is fundamental to public health. This has an influence on the risks of morbidity and mortality, and therefore can reduce these risks. Disease prevention and health promotion should be implemented as early as possible both in childhood and adolescence. Previous studies have focused on specific health behaviour (Yen et al. 1997; Chen et al. 2003).

The results of the t' value showed significant differences in strength component between Rajbangsi and general students, where Rajbangsi students were found superior than their counterparts. On the other hand t- value of speed component was not significant between Rajbangsi and general students, where Rajbangsi students were found slightly better than their counterparts. Also t- value of muscular endurance was significant between Rajbangsi and general students, where the general students were found better than their counterparts.

In conclusion the results of the present study confirm that Rajbangsi students

were comparatively better than general students. Present study shows that Rajbangsi students were superior in muscular strength whereas general students were superior in muscular endurance.

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